

Inventors and Scientists: Eli Whitney

By Biography.com Editors and A+E Networks, adapted by Newsela staff on 07.13.16

Word Count **417**



An engraving based off of a painting of inventor Eli Whitney, circa 1820-1830. Photo: Wikimedia Commons

Synopsis: Eli Whitney invented the cotton gin. The cotton gin made pulling seeds from cotton easier. He also promoted a new way of making things. It used “interchangeable parts.”

Early Life

Eli Whitney was born on December 8, 1765, in Massachusetts. As a boy, he loved knowing how machines worked. During the Revolutionary War, he built a machine that made nails.

Creation Of Cotton Gin

Whitney graduated from Yale College in 1792. After graduating, he met Catherine Greene and went to Greene's farm to study law. There, Whitney met Phineas Miller. He was Greene's fiancé and ran her farm.

Greene soon learned that the farmers needed something new to grow to make money. Green-seed cotton was easy to get. However, it took too long to clean by hand. Cotton is cleaned by pulling seeds out. Whitney built a machine that was able to quickly clean the cotton.

Whitney's cotton gin cleaned cotton much faster than workers could. Many farmers started growing the crop.

Pirated Patent And Slavery

Whitney and Miller patented the gin in 1794. This meant people had to pay them for their machine. They planned to take part of the money the farmers made when they used their cotton gins. Instead, farmers built their own gins. Whitney spent years in court. He ended up letting people use the machines at a low price. Southern planters made a great deal of money. Whitney made almost nothing.

Soon, the South had tons of cotton. Farmers needed people to pick the cotton. This led to more slavery.

Interchangeable Parts

Next, Whitney began building guns. The government needed people to build guns because of a possible war with France. Whitney promised to make 10,000 rifles in two years. The government accepted his offer in 1798.

At the time, rifles were usually built by a single person. Whitney built machines that made just one part of the gun. The parts were put together to make a gun. Any part could be used in any gun. That meant they were interchangeable.

Others also might have come up with using interchangeable parts. Still, Whitney helped to spread the system. Using interchangeable parts led to the way things are built today.

Whitney built homes for his workers. He also came up with rules to help workers and bosses get along more easily.

Personal Life

In 1817, Whitney married Henrietta Edwards. They had several children. Eli Whitney Jr. worked in his father's business. Whitney senior died on January 8, 1825, in New Haven, Connecticut.

Quiz

- 1 Read the sentence from "Pirated Patent And Slavery."

Instead, farmers built their own gins.

Which word would BEST replace the word "built" in the sentence without changing the meaning of the sentence?

- (A) produced
- (B) controlled
- (C) ordered
- (D) separated

- 2 Read the sentence from "Pirated Patent And Slavery."

Soon, the South had tons of cotton.

What does "tons" mean as it is used in the sentence?

- (A) machines
- (B) scraps
- (C) fields
- (D) lots

- 3 Why were Whitney's gun-building machines important?

- (A) They made money for Southern planters.
- (B) They built homes for Whitney's workers.
- (C) They led to how things are made today.
- (D) They helped the cotton gin work better.

- 4 What is one reason Eli Whitney ended up making almost nothing from the cotton gin?

- (A) He decided to make money on guns instead.
- (B) Farmers built their own cotton gins.
- (C) The cotton gins led to more slavery.
- (D) He didn't have a patent for the machine.

Answer Key

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